



STATE WILDLIFE GRANT—INDIANA

Developing and Evaluating an Outreach Campaign to Conserve Whooping Crane Populations in Indiana



An undergraduate conducts intercept surveys at Goose Pond FWA. (Photo by Anders Sjostrand)

CURRENT STATUS

First year of a three-year project

FUNDING SOURCES AND PARTNERS

State Wildlife Grant Program (T7R25)
Purdue University

PROJECT PERSONNEL

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BACKGROUND AND OBJECTIVES

Whooping cranes (*Grus americana*) are listed as a

federal and state endangered species and a Species of Greatest Conservation Need in the 2015 Indiana State Wildlife Action Plan. Whooping cranes came close to extinction in the 1940s and '50s, with the global population reaching an all-time low of about 20 individuals. In 2001, the Whooping Crane Eastern Partnership began releasing captive-bred whooping cranes into wetlands in Wisconsin. Using ultralight aircraft, scientists established a migration route for the population with a southern terminus in Florida. All whooping cranes in this distinct eastern migratory population of about 100 birds spend the summer in Wisconsin, but during the migration and wintering periods, they scatter across the lower Midwest and southeastern United States from southern Indiana to Florida.

Since reintroduction efforts began, there has been an increase in the number of confirmed shootings of whooping cranes. Five shootings occurred between 1970 and 2000, compared to 22 from 2001 to 2017. This represents more than an eight-fold increase. These shootings are disproportionately affecting the



Sandhill cranes fly over Goose Pond FWA. (Photo by Anders Sjostrand)

reintroduced populations, which are struggling to become self-sustaining. Other sources of mortality include powerline collisions and predation, the latter of which may be due to loss and alteration of wetland habitats. Indiana has the highest number of shootings (five between 2009 and 2017) in the eastern migratory population. Most shootings are not conducted by hunters engaged in legal hunting who misidentify their target, but likely by vandals, most of whom are probably unaware that the species is endangered.

Little is known about people's awareness and attitudes toward whooping cranes in Indiana. Because whooping cranes now use two state Fish & Wildlife Areas (FWAs) as stopovers during migration, coupled with a concurrent increase in shootings, conservation of this endangered species in Indiana has become increasingly important. Successful conservation requires that citizens and resource users be aware of the importance of this species as part of Indiana's natural history, as well as the activities that can further endanger these highly imperiled birds.

Programs that familiarize the public with a particular species may benefit populations in the long run. Baseline levels of knowledge, awareness, and attitudes of Indiana residents toward whooping cranes, particularly in areas where they congregate, should first be assessed before developing a social marketing campaign

to increase guardianship of the species, create pride in local communities, and advertise the harsh penalties associated with harming an endangered species. The objectives of this project are to:

1. Conduct a statewide baseline survey of Indiana residents including specific targeted communities in the areas of Goose Pond and Jasper-Pulaski FWAs, as well as of the users of these properties.
2. Develop and implement an informational campaign based on baseline survey results.
3. Assess developed materials by conducting a statewide survey and facilitating a focus group discussion with conservation partners.
4. Conduct post-campaign surveys of Indiana residents including specific targeted communities in the areas of Goose Pond and Jasper-Pulaski FWAs, and the users of those properties.

METHODS

To gain preliminary insights and test survey questions, an online survey was distributed in spring 2018 to 396 urban residents throughout Indiana using Survey Sampling International (SSI). Urban residents were characterized as living in areas where ZIP codes overlapped with any part of a Tiger Urban Area, as defined by the U.S. Census Bureau.

In summer 2018, a five-wave survey was distributed

by mail with the goal of reaching 1,200 randomly selected respondents throughout Indiana. The response rate was 26.8%. Additionally, two five-wave regional mail surveys were distributed to 200 addresses within a 10-mile radius of Goose Pond and Jasper-Pulaski FWAs. One survey wave used a drop-off/pick-up methodology to increase response rate. This methodology involved physically delivering and retrieving surveys to every house in the regional samples. This approach yielded response rates of 34.1% for Goose Pond FWA and 41.5% for Jasper-Pulaski FWA.

Our last step was to conduct in-person surveys at Goose Pond and Jasper-Pulaski FWAs during the spring and fall migrations to assess property users' awareness and interactions with whooping cranes. These surveys took about 10 minutes and included questions about their visit to the property and their knowledge and awareness of whooping cranes.

PROGRESS TO DATE

A total of 62 in-person surveys were completed. All other surveys are closed, and analysis is underway. During spring migration in February and March 2019, more careful planning will allow field workers



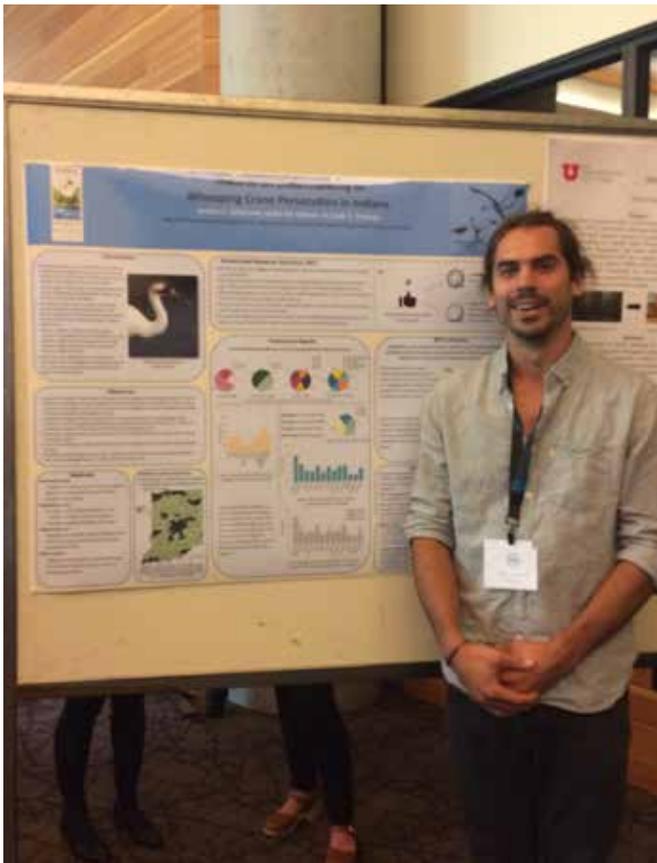
A research associate conducts intercept surveys at Jasper-Pulaski FWA. (Photo by Anders Sjostrand)

to maximize the number of FWA visitors encountered during each visit. Preliminary analysis of survey results suggests the following:

- Respondents generally reported high levels of awareness and moderate ability to identify whooping cranes in the wild.
- Knowledge of whooping crane's endangered status was relatively high statewide, but knowledge of their physical characteristics was lower than expected.
- Respondents generally held highly positive attitudes toward whooping cranes.
- Statewide, there were extremely low rates of visitation to FWAs, particularly Jasper-Pulaski and Goose Pond, the two FWAs where whooping cranes primarily occur in Indiana. Visitation rates were marginally higher on the regional surveys.
- Respondents' engagement in recreational activities on public lands was also particularly low.

Data from these four surveys will be used to develop and disseminate an outreach and education campaign throughout Indiana. To more creatively design this campaign, an undergraduate course at Purdue University is scheduled for the 2019 spring semester. Patterned after the success of a similar idea for an outreach program for freshwater mussel conservation on the Tippecanoe River (State Wildlife Grant T7R16), this course will allow students to use conclusions from the survey to creatively develop material for the informational campaign.

COST: \$277,034 FOR THE COMPLETE THREE-YEAR PROJECT



Results from the SSI survey were presented at the International Association of Society and Nature Resources conference in June 2018. (Photo by Linda Prokopy)